

**HERMETICALLY SEALED MICRO-DEVICE PACKAGE
USING COLD-GAS DYNAMIC SPRAY MATERIAL DEPOSITION**

ABSTRACT OF THE DISCLOSURE

[0130] A cover assembly for welding to a package base to form a hermetically sealed micro-device package. The cover assembly includes a sheet of a transparent material having a window portion. A built-up metallic frame adheres to the sheet and circumscribes the window portion, the frame having been deposited as follows: First, powdered metal particles are sprayed onto a prepared area of the sheet using a gas jet at a temperature below the fusing temperature of the particles, the jet having a velocity sufficient to cause the particles to merge with one another upon impact with the sheet and with one another to form an initial continuous metallic coating adhering to the prepared area of the sheet. Next, successive metal particles are applied over the initial coating using the jet to form the frame incorporating the initial continuous metallic coating as its base and having an predetermined overall thickness.